Inventor Search

=> d ibib abs ind l7 1-2

L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:247130 HCAPLUS
DOCUMENT NUMBER: 134:251562
TITLE: Composition comprising casein protein and whey protein
INVENTOR(S): **Kuslys, Martinas**; **Secretin, Marie-christine**; Jost, Rolf; Maire, Jean-claude; **Ballevre, Olivier**; **Haschke, Ferdinand**; **Kratky, Zdenek**; **Meister, Niklaus**
PATENT ASSIGNEE(S): Societe des Produits Nestle S.A., Switz.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001022837	A1	20010405	WO 2000-EP8910	20000912
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1220620	A1	20020710	EP 2000-965982	20000912
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TR 200200840	T2	20020923	TR 2002-200200840	20000912
BR 2000014377	A	20021119	BR 2000-14377	20000912
JP 2003510059	T2	20030318	JP 2001-526061	20000912
NZ 517994	A	20030829	NZ 2000-517994	20000912
ZA 2002002081	A	20030613	ZA 2002-2081	20020313
NO 2002001333	A	20020514	NO 2002-1333	20020318

PRIORITY APPLN. INFO.: GB 1999-23048 A 19990929
WO 2000-EP8910 W 20000912

AB A composition for an infant formula which comprises casein protein and whey protein; a method of producing the composition; use of the composition in the manufacture of a medicament or nutritional product for addressing malnutrition; and a method of addressing malnutrition which comprises administering an effective amount of the composition A preferred embodiment of the composition comprises non-hydrolyzed protein, free arginine; tryptophan and histidine, a lipid source and a carbohydrate source. In addition, the whey protein is acid whey protein or sweet whey protein from which caseino-glycomacropeptide has been removed.

IC ICM A23L001-29
ICS A23L001-305; A23L001-30; A23L001-09
CC 17-6 (Food and Feed Chemistry)
ST casein whey protein infant formula
IT Malnutrition
(composition for infant formulas comprising casein and whey proteins)
IT Carbohydrates, biological studies
Caseins, biological studies
Lipids, biological studies

Proteins, general, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(composition for infant formulas comprising casein and whey proteins)
IT Milk substitutes
(human; composition for infant formulas comprising casein and whey proteins)
IT Proteins, general, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(milk; composition for infant formulas comprising casein and whey proteins)
IT Proteins, specific or class
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(whey; composition for infant formulas comprising casein and whey proteins)
IT Caseins, processes
RL: REM (Removal or disposal); PROC (Process)
(κ-, glycomacropeptides; composition for infant formulas comprising casein and whey proteins)
IT 71-00-1, L-Histidine, biological studies 73-22-3, Tryptophan, biological studies 74-79-3, L-Arginine, biological studies 1305-62-0, Calcium hydroxide, biological studies 1310-58-3, Potassium hydroxide, biological studies 1310-73-2, Sodium hydroxide, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(composition for infant formulas comprising casein and whey proteins)
IT 63-42-3, Lactose
RL: REM (Removal or disposal); PROC (Process)
(composition for infant formulas comprising casein and whey proteins)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:136958 HCAPLUS
DOCUMENT NUMBER: 134:177734
TITLE: Composition for an infant formula having a low threonine content
INVENTOR(S): **Kratky, Zdenek**; Maire, Jean-Claude; **Ballevre, Olivier**; **Haschke, Ferdinand**; Jost, Rolf; **Kuslys, Martinas**; **Meister, Niklaus**; **Secretin, Marie-Christine**
PATENT ASSIGNEE(S): Societe des Produits Nestle S.A., Switz.
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001011990	A1	20010222	WO 2000-EP3887	20000502
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1048226	A1	20001102	EP 1999-108405	19990429
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000010125	A	20020115	BR 2000-10125	20000502

AU 765986	B2	20031009	AU 2000-47535		20000502
NO 2001005178	A	20011023	NO 2001-5178		20011023
US 6777391	B1	20040817	US 2002-19848		20020422
PRIORITY APPLN. INFO.:			EP 1999-108405	A	19990429
			GB 1999-23048	A	19990929
			WO 2000-EP3887	W	20000502

AB A composition for an infant formula which comprises a low threonine content; a method of producing the composition; use of the composition in the manufacture of a medicament or nutritional product for addressing the nutritional needs and providing healthy growth of an infant; and a method of addressing the nutritional needs and providing healthy growth of an infant which comprises administering an effective amount of the composition are disclosed. A preferred embodiment of the composition comprises all of: 1) acid whey protein or sweet whey protein from which caseino-glyco-macropeptide has been removed; 2) free arginine; 3) free histidine; and 4) free tyrosine or free tryptophan or tryptophan rich milk protein or a mixture thereof.

IC ICM A23L001-29
ICS A23L001-305; A23L001-30; A23L001-09

CC 17-8 (Food and Feed Chemistry)
Section cross-reference(s): 63

ST threonine low infant formula; milk substitute infant threonine low; protein whey infant formula

IT Whey
(acid, proteins; composition for an infant formula having a low threonine content)

IT Drugs
Health food
(composition for an infant formula having a low threonine content)

IT Amino acids, biological studies
Canola oil
Carbohydrates, biological studies
Coconut oil
Fats and Glyceridic oils, biological studies
Lipids, biological studies
Palm oil
Protein hydrolyzates
Proteins, general, biological studies
Soybean oil
Sunflower oil
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(composition for an infant formula having a low threonine content)

IT Phospholipids, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(egg; composition for an infant formula having a low threonine content)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(fish; composition for an infant formula having a low threonine content)

IT Caseins, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(glycopeptide; composition for an infant formula having a low threonine content)

IT Milk substitutes
(human; composition for an infant formula having a low threonine content)

IT Glycerides, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(medium-chain; composition for an infant formula having a low threonine content)

IT Proteins, general, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(milk, tryptophan-high; composition for an infant formula having a low threonine content)

IT Sunflower oil
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(oleic acid-high; composition for an infant formula having a low threonine content)

IT Palm oil
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(oleins; composition for an infant formula having a low threonine content)

IT Proteins, specific or class
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(whey; composition for an infant formula having a low threonine content)

IT Lactalbumins
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(α-; composition for an infant formula having a low threonine content)

IT 60-18-4, L-Tyrosine, biological studies 71-00-1, L-Histidine, biological studies 73-22-3, L-Tryptophan, biological studies 74-79-3, L-Arginine, biological studies 9050-36-6, Maltodextrin 134214-76-9, Novozyme
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(composition for an infant formula having a low threonine content)

IT 63-42-3, Lactose
RL: FFD (Food or feed use); REM (Removal or disposal); BIOL (Biological study); PROC (Process); USES (Uses)
(composition for an infant formula having a low threonine content)

IT 72-19-5, L-Threonine, processes
RL: REM (Removal or disposal); PROC (Process)
(composition for an infant formula having a low threonine content)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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     FILE 'REGISTRY' ENTERED AT 13:39:51 ON 15 SEP 2004
                  E CASEINO-GLYCO-MACROPEPTIDE/CN
                  E CASEIN/CN
L1                1 SEA ABB=ON  CASEIN/CN
                  E ARGININE/CN
L2                2 SEA ABB=ON  ARGININE/CN
                  E HISTIDINE/CN
L3                2 SEA ABB=ON  HISTIDINE/CN
                  E TRYPTOPHAN/CN
L4                2 SEA ABB=ON  TRYPTOPHAN/CN

     FILE 'HCAPLUS' ENTERED AT 13:40:47 ON 15 SEP 2004
L5           415923 SEA ABB=ON  (?WHEY? OR L1 OR L2 OR L3 OR L4 OR ?CASEIN? OR
                    ?ARGININE? OR ?HISTIDINE? OR ?TRYPTOPHAN? OR ?MILK?)
L6                2 SEA ABB=ON  L5 AND (?CASEINO?(W)?GLYCO?(W)?MACROPEPTID? OR
                    ?CASEINOGLYCOMACROPEPTID?)(L)(?REMOV? OR ?EXTRACT? OR NOT?(3A)(
                    ?CONTAIN? OR ?CONTENT?))
L7                2 SEA ABB=ON  L6 AND (?LIPID? OR ?CARBOHYDRAT? OR ?PROTEIN?)
L8                0 SEA ABB=ON  L7 AND NON?(W)?HYDROL?
L9              123 SEA ABB=ON  L5 AND NON?(W)?HYDROL?
L10              32 SEA ABB=ON  L9 AND (?COMPOS? OR ?METHOD? OR ?TECHNIQ?)
L11               0 SEA ABB=ON  L10 AND ?BLEND?
L12              34 SEA ABB=ON  L10 OR L7

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, AGRICOLA, CABA,
     CROPB, CROPR, CROPU, FSTA, FROSTI, LIFESCI' ENTERED AT 13:45:48 ON 15 SEP
     2004
L13             121 SEA ABB=ON  L12
L14              84 DUP REMOV L13 (37 DUPLICATES REMOVED)
L15              74 SEA ABB=ON  L14 AND NON(W) HYDROL?
L16               6 SEA ABB=ON  L15 AND INFANT?(2A) FORMULA?

     FILE 'HCAPLUS' ENTERED AT 13:53:08 ON 15 SEP 2004
L17               4 SEA ABB=ON  L12 AND ?INFANT?(W)?FORMULA?
L18              34 SEA ABB=ON  L12 OR L17
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6 cits from Cluster of databases

34 cits from CA Plus

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=> d que stat l18
L1             1 SEA FILE=REGISTRY ABB=ON  CASEIN/CN
L2             2 SEA FILE=REGISTRY ABB=ON  ARGININE/CN
L3             2 SEA FILE=REGISTRY ABB=ON  HISTIDINE/CN
L4             2 SEA FILE=REGISTRY ABB=ON  TRYPTOPHAN/CN
L5        415923 SEA FILE=HCAPLUS ABB=ON  (?WHEY? OR L1 OR L2 OR L3 OR L4 OR
                 ?CASEIN? OR ?ARGININE? OR ?HISTIDINE? OR ?TRYPTOPHAN? OR
                 ?MILK?)
L6             2 SEA FILE=HCAPLUS ABB=ON  L5 AND (?CASEINO?(W)?GLYCO?(W)?MACROPE
                 PTID? OR ?CASEINOGLYCOMACROPEPTID?)(L)(?REMOV? OR ?EXTRACT? OR
                 NOT?(3A)(?CONTAIN? OR ?CONTENT?))
L7             2 SEA FILE=HCAPLUS ABB=ON  L6 AND (?LIPID? OR ?CARBOHYDRAT? OR
                 ?PROTEIN?)
L9           123 SEA FILE=HCAPLUS ABB=ON  L5 AND NON?(W)?HYDROL?
L10           32 SEA FILE=HCAPLUS ABB=ON  L9 AND (?COMPOS? OR ?METHOD? OR
                 ?TECHNIQ?)
L12           34 SEA FILE=HCAPLUS ABB=ON  L10 OR L7
L17            4 SEA FILE=HCAPLUS ABB=ON  L12 AND ?INFANT?(W)?FORMULA?
L18           34 SEA FILE=HCAPLUS ABB=ON  L12 OR L17

=> d ibib abs l18 1-34

L18  ANSWER 1 OF 34  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2003:592760  HCAPLUS
DOCUMENT NUMBER:         140:248863
TITLE:                   Structural changes in the Ras protein revealed by
                         fluorescence spectroscopy
AUTHOR(S):               Brockhinke, Andreas; Plessow, Regina;
                         Kohse-Hoeinghaus, Katharina; Herrmann, Christian
CORPORATE SOURCE:        Physikalische Chemie I, Fakultaet fuer Chemie,
                         Universitaet Bielefeld, Bielefeld, D-33615, Germany
SOURCE:                  Physical Chemistry Chemical Physics (2003), 5(16),
                         3498-3506
                         CODEN: PPCPFQ; ISSN: 1463-9076
PUBLISHER:               Royal Society of Chemistry
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   The Y32W mutant of the Ras protein which has a tryptophan
     residue close to the guanine nucleotide binding site is studied using two
     fluorescence spectroscopic techniques.  Two-dimensional mapping
     of all emission and all fluorescence spectra using excitation-emission
     spectroscopy (EES) in conjunction with time-resolved laser-induced
     fluorescence (LIF) is used to analyze and assign the contribution of the
     different fluorophores to the total fluorescence.  Time-resolved LIF is
     shown to be a method that allows to follow the slight
     conformational changes of Ras binding to the nucleotides GDP, GTP, or the
     non-hydrolyzable analogs GppNHp, GppCH2p and
     GTP-γS and allows to distinguish between the active and inactive
     form.  Addnl., a variant of the EES technique is used for the
     investigation of the intrinsic GTPase function of Ras and the determination of
     kinetic consts. for this reaction.
REFERENCE COUNT:         35    THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18  ANSWER 2 OF 34  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2003:414174  HCAPLUS
DOCUMENT NUMBER:         138:400870
TITLE:                   Shelf-stable nutritional formulation containing
                         non-hydrolyzed whey
                         protein
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INVENTOR(S): Jost, Rolf
PATENT ASSIGNEE(S): Nestec S.A., Switz.
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1314361	A1	20030528	EP 2002-20208	20020910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2003099761	A1	20030529	US 2002-245363	20020918
PRIORITY APPLN. INFO.:			EP 2001-128025 A	20011126

AB A nutritionally complete calorically dense formula (including high-protein oral and enteral formulas), suitable for use as a ready-to-use liquid **composition** that does not require reconstitution and admixing, contains intact **whey** protein in high concentration and is shelf stable for ≥6 mo at ambient temperature **Whey** protein solns. are sterilized at high concns. (≤10%) and in the presence of high concns. of carbohydrates, sucrose and(or) maltodextrins. The intact **whey** protein formula is obtained by: (i) adjusting an acid phase **composed** of **whey** protein and carbohydrates to a pH of 2.5-3.5 and subsequently UHT-sterilizing it; (ii) neutralizing the sterilized acid phase with a soluble base, the pH being raised aseptically to ≥6.50; and (iii) sep. UHT-sterilizing a fat phase in the form of a stable O/W emulsion (pH 6.50-7.50 at ambient temperature) and aseptically combining the two sep. sterilized phases (the combined phases containing all the soluble and insol. minerals of the formula, the trace elements and vitamins) and aseptically filling the mixture into a suitable package.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:76519 HCAPLUS
DOCUMENT NUMBER: 138:105980
TITLE: **Casein** hydrolysis for inclusion in **casein** hydrolyzate-**whey** protein **milk**-like **composition**
INVENTOR(S): Edens, Luppo; De Roos, Andre Leonardus
PATENT ASSIGNEE(S): DSM N.V., Neth.
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003007730	A1	20030130	WO 2002-EP8072	20020718
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1406509 A1 20040414 EP 2002-760254 20020718

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

JP 2004521653 T2 20040722 JP 2003-513349 20020718

PRIORITY APPLN. INFO.: EP 2001-202749 A 20010718

WO 2002-EP8072 W 20020718

AB A **composition** for use in the manufacture of beverages, dietetic foods, etc., comprises hydrolyzed **milk casein** and **non -hydrolyzed whey** protein in a ratio from 9:1 to 1:1 (dry weight basis) and is a clear liquid at pH 4 when dissolved or present in water at 40 g/L at 10°. Thus, sodium **caseinate** is hydrolyzed sequentially with Delvolase and Aspergillus niger proline-specific endoprotease (final degree of hydrolysis 16-20%). Concentrated **casein** hydrolyzate (6 g/L) is mixed with an equal volume of double-concentrated **whey** proteins (1.3 g/L) to produce a **milk** -like product.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:900235 HCAPLUS

DOCUMENT NUMBER: 138:204182

TITLE: Hydrolyzed versus nonhydrolyzed protein diet in short bowel syndrome in children

AUTHOR(S): Ksiazyk, Janusz; Piena, Marjolein; Kierkus, Jaroslaw; Lyszkowska, Malgorzata

CORPORATE SOURCE: Department of Gastroenterology, Hepatology and Nutrition, Children's Memorial Health Institute, Warsaw, Pol.

SOURCE: Journal of Pediatric Gastroenterology and Nutrition (2002), 35(5), 615-618

CODEN: JPGND6; ISSN: 0277-2116

PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Background There is no consensus regarding the optimal enteral formula in patients with neonatal short bowel syndrome. The common practice in many centers is to give a semielemental diet. **Methods** To test the hypothesis that hydrolyzed protein is not superior to standard formula in promoting growth and development of children with short bowel syndrome, 10 children aged 4.08 ± 2.45 mo (mean ± SD) underwent a prospective, randomized, crossover, double-blind study lasting 60 days (with crossover on day 31). Two enteral formulas, which differed only with respect to the nitrogen form - hydrolyzed and nonhydrolyzed **whey** protein - were used. The endpoints of the study were nitrogen balance and intestinal permeability measured by the sugar absorption test (lactulose/mannitol excretion ratio). Results Energy intake from enteral formula in patients fed hydrolyzed and nonhydrolyzed formula was the same and amounted to about 31% of total intake. The ratio of total energy intake (enteral and parenteral) to resting energy expenditure was 1.7 ± 0.5 and 1.5 ± 0.3 in patients fed hydrolyzed and **non hydrolyzed** formula resp. Nitrogen balance was 0.28 ± 0.05 g/kg/d and 0.29 ± 0.05 g/kg/day, resp. Lactulose/mannitol ratio before the study was 0.85 ± 0.85 and after hydrolyzed and nonhydrolyzed formula was 0.59% ± 0.51% and 0.69% ± 0.72%, resp. Conclusion Intestinal permeability,

energy, and nitrogen balance in short bowel syndrome were not influenced in the short term by hydrolysis of the enteral nitrogen source.
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:710319 HCAPLUS
DOCUMENT NUMBER: 137:381427
TITLE: Structure of the Sec23/24-Sar1 pre-budding complex of the COPII vesicle coat
AUTHOR(S): Bi, Xiping; Corpina, Richard A.; Goldberg, Jonathan
CORPORATE SOURCE: Howard Hughes Medical Institute and the Cellular Biochemistry and Biophysics Program, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021, USA
SOURCE: Nature (London, United Kingdom) (2002), 419(6904), 271-277
CODEN: NATUAS; ISSN: 0028-0836
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB COPII-coated vesicles form on the endoplasmic reticulum by the stepwise recruitment of three cytosolic components: Sar1-GTP to initiate coat formation, Sec23/24 heterodimer to select SNARE and cargo mols., and Sec13/31 to induce coat polymerization and membrane deformation. Crystallog. anal. of the Saccharomyces cerevisiae Sec23/24-Sar1 complex reveals a bow-tie-shaped structure, 15 nm long, with a membrane-proximal surface that is concave and pos. charged to conform to the size and acidic-phospholipid **composition** of the COPII vesicle. Sec23 and Sar1 form a continuous surface stabilized by a **non-hydrolyzable** GTP analog, and Sar1 has rearranged from the GDP conformation to expose amino-terminal residues that will probably embed in the bilayer. The GTPase-activating protein (GAP) activity of Sec23 involves an **arginine** side chain inserted into the Sar1 active site. These observations establish the structural basis for GTP-dependent recruitment of a vesicular coat complex, and for uncoating through coat-controlled GTP hydrolysis.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:106402 HCAPLUS
DOCUMENT NUMBER: 136:324821
TITLE: **Composition** of hydrolysable amino acids in soil organic matter and soil microbial biomass
AUTHOR(S): Friedel, Jurgen K.; Scheller, Edwin
CORPORATE SOURCE: University of Agricultural Sciences, Institute of Organic Farming, Vienna, 1180, Austria
SOURCE: Soil Biology & Biochemistry (2002), 34(3), 315-325
CODEN: SBIOAH; ISSN: 0038-0717
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We hydrolyzed (6M HCl) soil organic matter (SOM) from mineral top-soil horizons, litter, and the fraction rendered extractable by 0.5M K2SO4 after chloroform fumigation from 8 soils under arable, grassland and forest use, covering a wide range of site conditions. Our aims were to quantify amino acid contents in the hydrolyzate derived from whole soil, litter and soil microbial biomass, resp. We also wanted to test if the pattern of hydrolysable amino acids of the whole soil is uniform irresp.

of site conditions and land use, and if there is a relation with the amino acid pattern of the resp. soil microbial community. The content of hydrolysable amino acids in the whole soil was higher in the soil samples from grassland and forest use than from arable land, and highly correlated with soil total N (Nt) and total organic carbon (TOC) contents. About 28-50% of Nt was found as N in hydrolysable amino acids. This is in accordance with percentages reported for hydrolysable amino acid N in the literature. Much higher values found for amide/peptide N by 15N-NMR spectroscopy are presumably due to **non-hydrolysable** peptides in the SOM. Amino acids derived from the soil microbial biomass also had lowest contents in arable soils and were highly correlated with microbial N (Nmic) and C (Cmic) contents. About 1-5% of TOC and 2-7% of Nt were bound in soil microorganisms. The percentage of 'microbial' amino acid-N in relation to hydrolysable amino acid-N in the whole soil ranged from 1.4 to 5.1%. The pattern of hydrolysable amino acids in the whole soil and the litter was rather uniform irresp. of site conditions and land use. The pattern of microbial amino acids was much more variable. It was different from that in the whole soil in a principal component anal. and showed no consistent relationship with it. Soil pH values are presumably one major factor inducing the variability in the microbial amino acid pattern. An assimilation of the amino acid **composition** of litter to that found in mineral soil seems to occur already in the early stages of **decompn**

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REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:247130 HCAPLUS
DOCUMENT NUMBER: 134:251562
TITLE: **Composition** comprising **casein** protein and **whey** protein
INVENTOR(S): Kuslys, Martinas; Secretin, Marie-christine; Jost, Rolf; Maire, Jean-claude; Ballevre, Olivier; Haschke, Ferdinand; Kratky, Zdenek; Meister, Niklaus
PATENT ASSIGNEE(S): Societe des Produits Nestle S.A., Switz.
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001022837	A1	20010405	WO 2000-EP8910	20000912
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1220620	A1	20020710	EP 2000-965982	20000912
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
TR 200200840	T2	20020923	TR 2002-200200840	20000912
BR 2000014377	A	20021119	BR 2000-14377	20000912
JP 2003510059	T2	20030318	JP 2001-526061	20000912

NZ 517994	A	20030829	NZ 2000-517994		20000912
ZA 2002002081	A	20030613	ZA 2002-2081		20020313
NO 2002001333	A	20020514	NO 2002-1333		20020318
PRIORITY APPLN. INFO.:			GB 1999-23048	A	19990929
			WO 2000-EP8910	W	20000912

AB A **composition** for an **infant formula** which comprises **casein** protein and **whey** protein; a **method** of producing the **composition**; use of the **compn** . in the manufacture of a medicament or nutritional product for addressing malnutrition; and a **method** of addressing malnutrition which comprises administering an effective amount of the **composition** A preferred embodiment of the **composition** comprises **non-hydrolyzed** protein, free **arginine**; **tryptophan** and **histidine**, a lipid source and a carbohydrate source. In addition, the **whey** protein is acid **whey** protein or sweet **whey** protein from which **caseino**-glycomacropeptide has been removed.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:136958 HCAPLUS
DOCUMENT NUMBER: 134:177734
TITLE: Composition for an **infant formula** having a low threonine content
INVENTOR(S): Kratky, Zdenek; Maire, Jean-Claude; Ballevre, Olivier; Haschke, Ferdinand; Jost, Rolf; Kuslys, Martinas; Meister, Niklaus; Secretin, Marie-Christine
PATENT ASSIGNEE(S): Societe des Produits Nestle S.A., Switz.
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2001011990	A1	20010222	WO 2000-EP3887		20000502
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
EP 1048226	A1	20001102	EP 1999-108405		19990429
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
BR 2000010125	A	20020115	BR 2000-10125		20000502
AU 765986	B2	20031009	AU 2000-47535		20000502
NO 2001005178	A	20011023	NO 2001-5178		20011023
US 6777391	B1	20040817	US 2002-19848		20020422
PRIORITY APPLN. INFO.:			EP 1999-108405	A	19990429
			GB 1999-23048	A	19990929
			WO 2000-EP3887	W	20000502

AB A composition for an **infant formula** which comprises a low threonine content; a method of producing the composition; use of the composition in

the manufacture of a medicament or nutritional product for addressing the nutritional needs and providing healthy growth of an infant; and a method of addressing the nutritional needs and providing healthy growth of an infant which comprises administering an effective amount of the composition are disclosed. A preferred embodiment of the composition comprises all of: 1) acid **whey protein** or sweet **whey protein** from which **caseino-glyco-macropeptide** has been **removed**; 2) free **arginine**; 3) free **histidine**; and 4) free tyrosine or free **tryptophan** or **tryptophan** rich **milk protein** or a mixture thereof.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:773864 HCAPLUS
DOCUMENT NUMBER: 133:321220
TITLE: **Infant formula** containing sweet **whey protein**
INVENTOR(S): Kratky, Zdenek; Maire, Jean-claude
PATENT ASSIGNEE(S): Societe Des Produits Nestle S.A., Switz.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EP[illegible]
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DA	APPLICATION NO.	DATE
EP 1048226	A1	20	EP 1999-108405	19990429
R: AT, BE, CH, DE, DK, E			:B, GR, IT, LI, LU, NL, SE, MC, PT,	
IE, SI, LT, LV, FI, R				
WO 2001011990	A1	20	WO 2000-EP3887	20000502
W: AE, AL, AM, AT, AU, A			:B, BG, BR, BY, CA, CH, CN, CR, CU,	
CZ, DE, DK, DM, EE, E			:B, GD, GE, GH, GM, HR, HU, ID, IL,	
IN, IS, JP, KE, KG, K			(Z, LC, LK, LR, LS, LT, LU, LV, MA,	
MD, MG, MK, MN, MW, M			JZ, PL, PT, RO, RU, SD, SE, SG, SI,	
SK, SL, TJ, TM, TR, T			JA, UG, US, UZ, VN, YU, ZA, ZW, AM,	
AZ, BY, KG, KZ, MD, F			M	
RW: GH, GM, KE, LS, MW, S			SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI,	
CM, GA, GN, GW, ML, M			SN, TD, TG	
BR 2000010125	A	2(	BR 2000-10125	20000502
AU 765986	B2	20031009	AU 2000-47535	20000502
ZA 2001008412	A	20030113	ZA 2001-8412	20011012
NO 2001005178	A	20011023	NO 2001-5178	20011023
US 6777391	B1	20040817	US 2002-19848	20020422

PRIORITY APPLN. INFO.:

EP 1999-108405	A	19990429
GB 1999-23048	A	19990929
WO 2000-EP3887	W	20000502

AB An **infant formula** which contains a **lipid** source, a **carbohydrate** source, and a **protein** source. The **protein** source contains the free amino acids **arginine**, tyrosine, and **histidine** and a hydrolyzed sweet **whey** fraction from which **caseino-glyco-macropeptide** has been **removed.** The **infant formula** is low in threonine and high in trypotophan. The **infant formula** may be a pre-term formula or a full-term hypoallergenic formula.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:658772 HCAPLUS
DOCUMENT NUMBER: 134:14607
TITLE: Fluorescence studies of ATP-diphosphohydrolase from Solanum tuberosum var. Desiree
AUTHOR(S): Espinosa, V.; Kettlun, A. M.; Zanocco, A.; Cardemil, E.; Valenzuela, M. A.
CORPORATE SOURCE: Departamento de Bioquimica y Biologia Molecular, Facultad de Ciencias Quimicas y Farmaceuticas, Universidad de Chile, Santiago, Chile
SOURCE: Phytochemistry (2000), 54(8), 995-1001
CODEN: PYTCAS; ISSN: 0031-9422
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chemical modification of potato apyrase suggests that **tryptophan** residues are close to the nucleotide binding site. Kd values (± Ca2+) for the complexes of apyrase with the **non-hydrolyzable** phosphonate adenine nucleotide analogs, adenosine 5'-(β,γ-methylene) triphosphate and adenosine 5'-(α,β-methylene) diphosphate, were obtained from quenching of the intrinsic enzyme fluorescence. Other fluorescent nucleotide analogs (2'(3')-O-(2,4,6-trinitrophenyl) ATP, 2'(3')-O-(2,4,6-trinitrophenyl) ADP, 1,N6-ethenoadenosine triphosphate and 1,N6-ethenoadenosine diphosphate) were hydrolyzed by apyrase in the presence of Ca2+, indicating binding to the active site. The dissociation consts. for the binding of these analogs were calculated from both the decrease of the protein (**tryptophan**) fluorescence and enhancement of the nucleotide fluorescence. Using the sensitized acceptor (nucleotide analog) fluorescence **method**, energy transfer was observed between enzyme **tryptophans** and ethene-derivs. These results support the view that **tryptophan** residues are present in the nucleotide-binding region of the protein, appropriately oriented to allow the energy transfer process to occur.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:207373 HCAPLUS
DOCUMENT NUMBER: 132:343565
TITLE: Vasopressin's depolarizing action on neonatal rat spinal lateral horn neurons may involve multiple conductances
AUTHOR(S): Kolaj, M.; Renaud, L. P.
CORPORATE SOURCE: Neuroscience Unit Loeb Research Institute, Ottawa Civic Hospital and University of Ottawa, Ottawa, ON, K1Y 4E9, Can.
SOURCE: Advances in Experimental Medicine and Biology (1998), 449(Vasopressin and Oxytocin), 201-210
CODEN: AEMBAP; ISSN: 0065-2598
PUBLISHER: Plenum Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Vasopressin-immunoreactive fibers have been visualized in the area of spinal lateral horn cells, including spinal sympathetic preganglionic neurons (SPNs). The presence and nature of vasopressin receptors on 125 neurons in this area were addressed using whole-cell patch-clamp **techniques** in transverse spinal cord slice prepns. from neonatal rat (11-21 days). Local pressure applications of Arg8-vasopressin (AVP, 1

μM) induced a slow-onset membrane depolarization accompanied by spike discharges and membrane oscillations. In voltage-clamp, applications of AVP (10nM-1 μM) induced a reversible, tetrodotoxin-resistant and dose-dependent inward current in 90% of tested cells. This effect was blocked by a V1 receptor antagonist [D-(CH2)5 Tyr (Me)-AVP], whereas a V2 receptor agonist [desamino-(D-Arg8)-vasopressin] was ineffective. Both the amplitude and duration of the AVP effect were significantly modified after intracellular dialysis of **non-hydrolyzable** G-protein modulators. I-V relationships, examined in 75 cells, suggested two conductances. In 36 cells the net AVP current reversed .apprx.-102mV, was associated with a decrease in membrane conductance and yielded linear I-V plots, suggesting mediation through closure of a resting potassium conductance. In a further 26 cells the I-V lines remained almost parallel in the voltage range used in this study (-130 to -40mV), while the membrane conductance was decreased in a majority of these cells. In the remaining 13 cells the net AVP current was estimated to reverse .apprx.-30mV and was associated with a small increase in membrane conductance, suggesting mediation through opening of a non-selective cationic conductance. These data indicate that the majority of SPNs and other lateral horn cells possess functional G-protein-coupled V1-type vasopressin receptors in the neonatal spinal cord. In the adult spinal cord, some of these receptors are likely to participate in CNS regulation of autonomic nervous system function.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:88858 HCAPLUS
DOCUMENT NUMBER: 133:29745
TITLE: The investigation of analytical **method** of purine content in high purine foods
AUTHOR(S): Jou, Jenq-Huei; Ker, Yi-Chang
CORPORATE SOURCE: Department of Food Health, Chia-nan College of Pharmacy and Science, Jen-Te Hsiang, Taiwan
SOURCE: Zhonghua Minguo Yingyang Xuehui Zazhi (1999), 24(4), 366-378
CODEN: ZMYZEG; ISSN: 1011-6958
PUBLISHER: Nutrition Society in Taipei
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The purpose of this study was to investigate the effects of different pH and ion concentration of mobile phase on separating purine and pyrimidine bases by reversed phase high performance liquid chromatog. (RP-HPLC). The 7 nucleobases could be separated perfectly in 18 min by RP-HPLC at a 0.02 M, pH 4.0 KOAc mobile phase with 0.1% triethylamine. The purine bases in soybean (0.05 g) were liberated from nucleic acids, nucleotides or nucleosides by a acid hydrolization with 2.75 mL trifluoroacetic acid (TFA): formic acid (FA): deionized water (5:5: 1) at 120° for 30 min. The preparation of sample with Sep-pak C18 cartridge could protect ODS column effectively, because the **nonpolar hydrolyzates** would be eliminated.

L18 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:799086 HCAPLUS
DOCUMENT NUMBER: 130:150204
TITLE: Reconstitution of DNA topoisomerase VI of the thermophilic archaeon Sulfolobus shibatae from subunits separately overexpressed in Escherichia coli
AUTHOR(S): Buhler, Cyril; Gadelle, Daniele; Forterre, Patrick;

Wang, James C.; Bergerat, Agnes
CORPORATE SOURCE: Institute de Genetique et Microbiologie, Universite Paris Sud, CNRS UMR 2225, Orsay, 91405, Fr.
SOURCE: Nucleic Acids Research (1998), 26(22), 5157-5162
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB DNA topoisomerase VI from the hyperthermophilic archaeon Sulfolobus shibatae is the prototype of a novel family of type II DNA topoisomerases that share little sequence similarity with other type II enzymes, including bacterial and eukaryal type II DNA topoisomerases and archaeal DNA gyrases. DNA topoisomerase VI relaxes both neg. and pos. supercoiled DNA in the presence of ATP and has no DNA supercoiling activity. The native enzyme is a heterotetramer **composed** of two subunits, A and B, with apparent mol. masses of 47 and 60 kDa, resp. Here we report the overexpression in Escherichia coli and the purification of each subunit. The A subunit exhibits clusters of **arginines** encoded by rare codons in E.coli. The expression of this protein thus requires the co-expression of the minor E.coli arginyl tRNA which reads AGG and AGA codons. The A subunit expressed in E.coli was obtained from inclusion bodies after denaturation and renaturation. The B subunit was overexpressed in E.coli and purified in soluble form. When purified B subunit was added to the renatured A subunit, ATP-dependent relaxation and decatenation activities of the hyperthermophilic DNA topoisomerase were reconstituted. The reconstituted recombinant enzyme exhibits a specific activity similar to the enzyme purified from S.shibatae. It catalyzes transient double-strand cleavage of DNA and becomes covalently attached to the ends of the cleaved DNA. This cleavage is detected only in the presence of both subunits and in the presence of ATP or its **non-hydrolyzable** analog AMPPNP.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:783613 HCAPLUS
DOCUMENT NUMBER: 130:121268
TITLE: Characterization of isoleucyl-tRNA synthetase from Staphylococcus aureus. II. Mechanism of inhibition by reaction intermediate and pseudomonic acid analogs studied using transient and steady-state kinetics
AUTHOR(S): Pope, Andrew J.; Moore, Keith J.; McVey, Mary; Mensah, Lucy; Benson, Neil; Osbourne, Neal; Broom, Nigel; Brown, Murray J. B.; O'Hanlon, Peter
CORPORATE SOURCE: Department of Molecular Recognition, SmithKline Beecham, Essex, CM19 5AW, UK
SOURCE: Journal of Biological Chemistry (1998), 273(48), 31691-31701
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The interactions of isoleucyl-tRNA synthetase (IleRS, E) from Staphylococcus aureus with both intermediate analogs and pseudomonic acid (PS-A) have been investigated using transient and steady-state **techniques. Non-hydrolyzable** analogs of isoleucyl-AMP (I) were simple competitive inhibitors (Ile-ol-AMP, Ki = 50 nM and Ile-NHSO2-AMP, Ki = 1 nM;). PS-A (J) inhibits IleRS via a slow-tight binding competitive mechanism where E·J (Kj = .apprx.2

nM), undergoes an isomerization to form a stabilized E*·J complex (K*j = 50 pM). To overcome tight-binding artifacts when K*j « [E], K*j values were estimated from PPi/ATP exchange where [S] » Km, thus raising K*j,app well above [E]. Using [3H]PS-A, it was confirmed that binding occurs with 1:1 stoichiometry and is reversible. Formation of inhibitor complexes was monitored directly through changes in enzyme **tryptophan** fluorescence. For Ile-ol-AMP and Ile-NHSO2-AMP, the fluorescence intensity of E·I was identical to that when E·Ile-AMP forms catalytically. Binding of PS-A induced only a small change in IleRS fluorescence that was characterized using transient kinetic competition. SB-205952, a PS-A analog, produced a 37% quenching of IleRS fluorescence upon binding as a result of radiationless energy transfer. Inhibitor reversal rates were obtained by measuring relaxation between spectroscopically different complexes. Together, these data represent a comprehensive solution to the kinetics of inhibition by these compds.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:560026 HCAPLUS
DOCUMENT NUMBER: 129:315288
TITLE: Selective hydrolysis of **milk** proteins to facilitate the elimination of the ABBOS epitope of bovine serum albumin and other immunoreactive epitopes
AUTHOR(S): Alting, Arno C.; Meijer, Ron J. G. M.; van Beresteijn, Emerentia C. H.
CORPORATE SOURCE: Department of Biophysical Chemistry, Netherlands Institute for Dairy Research (NIZO), Neth.
SOURCE: Journal of Food Protection (1998), 61(8), 1007-1012
CODEN: JFPRDR; ISSN: 0362-028X
PUBLISHER: International Association of Milk, Food and Environmental Sanitarians
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Milk** proteins are hydrolyzed to prevent immunol. reactions, but immunoreactive epitopes, including the ABBOS epitope of bovine serum albumin (BSA), can still be detected in com. available **milk** protein hydrolyzates. The authors used lactococcal cell-envelope proteinase (CEP) for the hydrolysis of the individual **milk** proteins and of mixts. thereof, or for the hydrolysis of sodium **caseinate** (contaminated with **whey** proteins). CEP exclusively degraded **casein**, leaving the four major **whey** proteins intact. This property facilitated the removal of the intact **whey** proteins from the **casein** fragments by ultrafiltration. Depending on the mol. mass of the **whey** protein to be removed, membranes with cutoff values between 3 and 30 kDa were used, resulting in **casein** hydrolyzates free of protein fragments with cross-reactive **whey**-protein-specific IgE (IgE) or ABBOS antibody-binding sites. Even the **casein** itself was degraded in such a way by CEP that cross-reactive **casein**-specific IgE antibody-binding sites could be eliminated. The product could find application in **infant formulas** for therapeutic and preventive treatment of children with cow's **milk** allergy; in addition, the preventive use of such formulas in children genetically susceptible to the development of insulin-dependent diabetes mellitus (IDDM) should be considered if a relationship between the consumption of BSA and IDDM were to become more apparent. The **method** is also applicable for preparing **casein**-free **whey** protein prepns.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:291438 HCAPLUS
DOCUMENT NUMBER: 128:285967
TITLE: Hydrolysis of tannery fleshings using pancreatic enzymes: a biotechnological tool for solid waste management
AUTHOR(S): Kumaraguru, S.; Sastry, T. P.; Rose, C.
CORPORATE SOURCE: Bioproducts Laboratory, Central Leather Research Institute, Madras, 600 020, India
SOURCE: Journal of the American Leather Chemists Association (1998), 93(2), 32-39
CODEN: JALCAQ; ISSN: 0002-9726
PUBLISHER: American Leather Chemists Association
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fleshings, the major solid waste generated at the pretanning operations of leather processing, were hydrolyzed using pancreatic enzymes with a view to evolve a simple **method** for solid waste management. The proteolytic activity of pancreatic homogenate with **casein** was 80 units/mL. Fleshings, treated with pancreatic enzyme preparation showed a 6-fold increase in proteolysis against the control at the end of 7 days. The total protein content, collagen and the free fatty acids in the hydrolyzate supernatant were 80.0, 10.64 and 72.86 mg/mL resp. The optimum pH for the enzyme preparation was 8.5. The hydrolysis was observed by almost total liquefaction of the fleshing.
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:65349 HCAPLUS
DOCUMENT NUMBER: 128:178478
TITLE: Nitric oxide regulation of atrioventricular node excitability
AUTHOR(S): Han, Xinqiang; Kobzik, Lester; Zhao, You-Yang; Opel, Douglas J.; Liu, Wen-Di; Kelly, Ralph A.; Smith, Thomas W.
CORPORATE SOURCE: Cardiovascular Division, Department of Medicine and Department of Pathology, Harvard Medical School and Harvard School of Public Health, Brigham and Women's Hospital, Boston, MA, 02115, USA
SOURCE: Canadian Journal of Cardiology (1997), 13(12), 1191-1201
CODEN: CJCAEX; ISSN: 0828-282X
PUBLISHER: Pulsus Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The role of nitric oxide in the autonomical regulation of atrioventricular (AV) spontaneous action potentials and L-type calcium current (ICa-L) in isolated single AV nodal cells from rabbit heart was examined by using the whole cell patch clamp **technique**, immunohistochem. staining and single cell reverse transcription polymerase chain reaction anal. The nitric oxide donor 3-morpholino-sydnonimine (SIN-1) (0.1 mmol/L) suppressed the beta-agonist isoproterenol- (1 μmol/L) stimulated increase in ICa-L and decreased the frequency and amplitude of spontaneous action potentials. In cells in which ICa-L had been previously attenuated by the muscarinic agonist carbamylcholine (CCh, 1 μmol/L), SIN-1 had no additive effect. Intracellular dialysis with the nitric oxide synthase inhibitor N-monomethyl-L-**arginine** (L-NMMA, 0.5 mmol/L) blocked

CCh- but not SIN-1-induced ICa-L attenuation. However, intracellular dialysis with methylene blue (20 μmol/L), which inhibits nitric oxide-mediated activation of guanylyl cyclase and cGMP production, blocked the effects of both CCh and SIN-1 on ICa-L. In these cells, neither L-NMMA nor methylene blue affected the CCh-activated potassium current (IK(ACh)). Internal dialysis with cGMP (10 μmol/L) significantly inhibited isoproterenol-stimulated ICa-L without affecting IK(ACh). In AV nodal cells internally perfused with either a **non-hydrolyzable** cAMP analog, 8-Br-cAMP (0.5 mmol/L), or a high concentration of cAMP (0.5 mmol/L), CCh did not inhibit ICa-L but still activated IK(ACh). CCh-induced ICa-L attenuation could be abolished or quickly reversed by the nonselective phosphodiesterase inhibitor 3-isobutyl-1-methylxanthine (20 μmol/L) but not by milrinone (5 μmol/L), which only inhibits the cGMP-inhibited phosphodiesterase isoenzyme (PDE3). Immunohistochem. staining identified the presence of the endothelial constitutive nitric oxide synthase (NOS3) in both single AV node cells in vitro and in cryostat sections of AV node tissue in situ. These results demonstrate that endogenous nitric oxide is involved in the muscarinic cholinergic attenuation of ICa-L in AV nodal cells; the mechanism likely involves the cGMP-stimulated phosphodiesterase.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:672558 HCAPLUS
DOCUMENT NUMBER: 127:358225
TITLE: The combined application of extrusion and enzymic technology for extraction of soybean oil
AUTHOR(S): Freitas, Suely Pereira; Hartman, Leopold; Couri, Sonia; Jablonka, Fany Hechtman; Piler de Carvalho, Carlos Wanderlei
CORPORATE SOURCE: National Center Food Technology Research, Guaratiba, 23020, Brazil
SOURCE: Fett/Lipid (1997), 99(9), 333-337
CODEN: FELIFX
PUBLISHER: Wiley-VCH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The new technol. process deals with the combined effect of thermoplastic extrusion of beans and the subsequent action of hydrolytic and proteolytic enzymes in aqueous medium to recover the oil, thus, avoiding solvent application. The thermoplastic extrusion is fundamental for the process, because it facilitates the action of enzymes in oil containing cells, reduces the non-hydratable phosphatides and promotes protein denaturation by reducing the emulsion stability and thus enhancing the oil extraction The main parameters affecting the oil yield are: the temperature and diameter of the die in the extrusion process, the dilution, the concentration of enzymes, and the incubation time of the enzymic treatment. The highest yield was obtained under the following conditions: extrusion of beans at 90° and exit die of 6 mm, enzymic incubation time of 6 h, extruded soy/water dilution ratio 1:10 and concentration of enzyme 6%. With these conditions 88% of the oil was obtained after centrifugation. Moreover, the aqueous enzymic extraction is easier than solvent extraction, and leads to high value products: a solvent-free meal more suitable for human consumption, a protein hydrolyzate that can be used as ingredient for liquid foods and an oil of better quality. The **non-hydrolyzed** meal contains ca 25% of original soybean protein and the residual oil. The protein hydrolyzate in the liquid phase contains ca 75% of the total protein in the

original grain with a mol. weight <20 kDa.

L18 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:594402 HCAPLUS
DOCUMENT NUMBER: 127:274542
TITLE: Interaction of lipoprotein lipase with homogeneous lipid emulsions
AUTHOR(S): Macphee, Cait E.; Chan, Robert Y. S.; Sawyer, William H.; Stafford, Walter F.; Howlett, Geoffrey J.
CORPORATE SOURCE: Russell Grimwade School of Biochemistry and Molecular Biology, University of Melbourne, Parkville, 3052, Australia
SOURCE: Journal of Lipid Research (1997), 38(8), 1649-1659
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: Lipid Research, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The central function of lipoprotein lipase (LpL) is to hydrolyze triacylglycerols in chylomicrons and very low d. lipoproteins. We have examined the binding of purified **milk** lipoprotein lipase to homogeneous synthetic lipid emulsions. Emulsions **composed** of either naturally occurring esterlinked lipids or the **non-hydrolyzable** ether analogs were prepared by sonication and pressure extrusion, and fractionated by sucrose d. gradient centrifugation. Flotation anal. using the anal. ultracentrifuge indicated that the individual fractions were relatively homogeneous with respect to size with flotation coeffs. and mol. wts. for the separated fractions ranging from 100 to 1100S and 5.2 + 107 to 6.0 + 108, resp. Purified **milk** lipoprotein lipase bound with high affinity and in a saturable manner to emulsions prepared from the **non-hydrolyzable** ether-linked lipid analogs of 1-oleoyl,2-palmitoyl phosphatidylcholine and triolein. At low concns. of LpL, the enzyme caused aggregation of the emulsion particles by interparticle crosslinking. At higher LpL concns., the flotation coefficient of the emulsions decreased significantly with a concomitant increase in particle d. At saturation, the number of LpL monomers bound to lipid particles of radii 67, 75, and 79 nm was 1315, 1449, and 1466, resp. The results demonstrate close packing of LpL on the lipid surface and are consistent with there being little disruption to the overall structure of the emulsion particle.

L18 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:726624 HCAPLUS
DOCUMENT NUMBER: 126:114930
TITLE: Effect of the apolipoprotein C-II/C-III1 ratio on the capacity of purified **milk** lipoprotein lipase to hydrolyze triglycerides in monolayer vesicles
AUTHOR(S): Lambert, Daniel A.; Catapano, Alberico L.; Smith, Louis C.; Sparrow, John T.; Gotto, Antonio M., Jr.
CORPORATE SOURCE: INSERM U. 308, Faculte de Medecine, BP 184, avenue de la Foret de Haye, Vandoeuvre, 54505, Fr.
SOURCE: Atherosclerosis (Shannon, Ireland) (1996), 127(2), 205-212
CODEN: ATHSBL; ISSN: 0021-9150
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of the apolipoprotein C-II/C-III1 ratio on the capacity of purified bovine **milk** lipoprotein lipase (LPL) to hydrolyze triglycerides was measured in a controlled model of pyrene-labeled nonanoyltriglycerides (1-2 ditetradecyl 3-pyrene nonanoyl glyceride)

monolayer vesicles. Monolayer was **composed** of triglycerides, a **non-hydrolysable** phospholipid ether, and cholesterol, a model system where the quality of the interface can be controlled. LPL released fatty acids from pyrene-triglycerides which were transferred from the lipoprotein structure to albumin. This transfer induces a decrease in the excimer production and in the excimer fluorescence intensity. Apolipoprotein C-II and C-III0 and C-III1 were purified from apolipoprotein VLDL. The 2 fragments, C-III1 A (peptide 1-40) and C-III1 B (peptide 41-79), were obtained after thrombin cleavage. Apolipoproteins C-III0 and C-IIII1 had a similar inhibitory effect on LPL. Inhibition with apo C-III0 or apo C-III1 was 85% of full LPL activity without inhibitor: Apo C-III1 B inhibited 62% of basal activity. It was 27% less effective than apo C-III1. Fragment C-III1 A did not inhibit LPL. The effect of change in both apo C-II (0-0.6 μM) and apo C-III1 (0-1.0 μM) on triglyceride hydrolysis shows the importance of the apo C-II/C-III1 ratio for the release of free fatty acids from triglycerides by LPL. The activating effect of apo C-II in the absence of the apo C-III inhibitor was maximal at 0.06 μM. No further activation was obtained between 0.06 and 0.30 μM. Higher concns. decreased LPL activity. Apo C-III1 (0.1 μM) decreased the maximum activation by apo C-II from 0.0196 to 0.063 nmol/min/nmol LPL. Higher concns. of apo C-III1 (0.1-0.5 μM) required higher apo C-II concns. (0.30 μM instead of 0.06 μM) for maximal activation than when apo C-III1 was absent. The activity of the enzyme without apo C-II was decreased by 65% by 0.12 μM apo C-III1. Increasing the apo C-II/apo C-III1 ratio from 0.1 to 1, increased the activation of the enzyme by a given apo C-II concentration Moreover, for a given apo C-II/C-III1 ratio, the LPL activation increased with the apo C-II concentration (between 0 and 0.010 μM) until a plateau was reached. This is important, as the change in the C-II/C-III1 ratio is not the only factor affecting LPL activity, and inhibition by apo C-III1 also depends on the overall quantity of apolipoproteins. Extrapolation of these results suggests that hyperlipoproteinemia seems to be more likely due to overprodn. of VLDL, than to a decrease in lipoprotein lipase activity.

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:401372 HCAPLUS
DOCUMENT NUMBER: 117:1372
TITLE: Oxytocin receptors on cultured astroglial cells. Regulation by a guanine-nucleotide-binding protein and effect of magnesium
AUTHOR(S): Di Scala-Guenot, Dominique; Strosser, Marie Therese
CORPORATE SOURCE: Lab. Physiol., CNRS, Strasbourg, 67084, Fr.
SOURCE: Biochemical Journal (1992), 284(2), 499-505
CODEN: BIJOAK; ISSN: 0306-3275
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Specific binding sites for the radioiodinated oxytocin (OT) antagonist d(CH2)5-[Tyr(Me)2,Thr4, Tyr-HN29]ornithine vasotocin ([125I]OTA) have been characterized on cultured hypothalamic astroglial cell membranes. The rate of association of the ligand to OT-binding sites was identical in the presence and the absence of the **non-hydrolysable** GTP analog guanosine 5'-[βγ-imido]triphosphate (Gpp[NH]p, 0.1 mM), whereas the monophasic dissociation reaction became biphasic in the presence of Gpp[NH]p. Scatchard anal. of equilibrium binding of [125I]OTA resulted in a linear plot with a single class of binding sites (Kd 0.06 nM) which were insensitive to the addition of Gpp[NH]p. Unlabeled OT and [Arg8]vasopressin (AVP) bound to high-(H) and low- (L) affinity states with a dissociation

constant ratio (KL/KH) of 100 for both hormones. Binding with both high and low affinity required the presence of Mg2+ in the incubation buffer, and the addition of Gpp[NH]p decreased the KL/KH ratio to 10 and increased the percentage of low-affinity binding sites. On the other hand, neither omission of Mg2+ from the buffer nor the addition of Gpp[NH]p altered the binding of either OT or V1 AVP antagonists to OT receptors. In the presence of a G-protein inactivator (N-ethylmaleimide; 3 nM) during OT competition studies the affinities of the two OT-binding sites were unchanged, but 90% of the high-affinity binding sites were converted into the low-affinity state. These results obtained with cultured hypothalamic astroglial cells provide further evidence for a coupling of OT receptors with a guanine-nucleotide-binding protein, with a requirement for Mg2+.

L18 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:55865 HCAPLUS
DOCUMENT NUMBER: 104:55865
TITLE: Dissolved and particulate amino acids and carbohydrates in the sea surface microlayer
AUTHOR(S): Henrichs, Susan M.; Williams, Peter M.
CORPORATE SOURCE: Inst. Mar. Sci., Univ. Alaska, Fairbanks, AK, 99701, USA
SOURCE: Marine Chemistry (1985), 17(2), 141-63
CODEN: MRCHBD; ISSN: 0304-4203
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eleven pairs of sea-surface microlayer (≤250μ) and subsurface water (5-15 cm depth) samples were collected near the coast of Baja California. Particulate matter was removed by filtration through polycarbonate membrane filters (8, 1, 0.2, 0.1, and 0.05μ pore sizes) and the filtrates analyzed for hydrolyzable amino acids and total carbohydrates. Dissolved free amino acids were measured in some samples on board ship. Hydrolyzable amino acids, free amino acids, and total carbohydrates were more concentrated in nearly all microlayer samples than in subsurface water samples taken at the same location. For hydrolyzable amino acids and total carbohydrates, enrichment was observed for both particulate and dissolved material. Averaging both microlayer and subsurface water samples, .apprx.20% of the dissolved organic C and .apprx.60% of particulate organic C were identified as carbohydrate or amino-acid C. Particulate hydrolyzable amino acids were mainly in the 1-8 and 0.2-1μ size ranges, but particulate total carbohydrates did not usually have pronounced maximum in particle-size distribution. Relative to their proportions in subsurface-water dissolved organic matter, hydrolyzable amino acids were increased over total carbohydrates in the microlayer and in particulate material. **Nonpolar hydrolyzable** amino acids also had higher concns. relative to other amino acids in microlayer and particulate organic matter. Differences in microlayer and subsurface water compns. are probably related both to differences in the surface activity of polymers containing amino acids and carbohydrates and to interactions between surface-active mols. and particles.

L18 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:86828 HCAPLUS
DOCUMENT NUMBER: 98:86828
TITLE: Lysosomal hydrolases in liver growth
AUTHOR(S): Baccino, Francesco Maria; Fiszer-Szafarz, Berta; Messina, Maria; Nadal, Claude; Barrera, Giuseppina; Guevara de Murillo, Alba; Tessitore, Luciana
CORPORATE SOURCE: Ist. Patol. Gen., Univ. Turin, Turin, I-10125, Italy
SOURCE: Biology of the Cell (1982), 46(1), 21-7
CODEN: BCELDF; ISSN: 0248-4900

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Total activity of 3 endopeptidases (cathepsins B, D, and L) and some other nonproteolytic lysosomal hydrolases were measured in rat liver during both normal and induced growth. In partially hepatectomized young adult rats, the early phases of liver regeneration correspond to the first fairly well synchronized proliferative wave of hepatocytes. During these phases, an appreciable decrease in cathepsin B activity occurred, as well as a distinct delay in the replacement of cathepsin D and L activities with respect to total protein. Acid phosphatase activity varied quite discontinuously, but its recovery at 30 h (peak of M phase) compared well with that for protein. In the liver of 8-10-day-old rats, as compared with young adults, the lysosomal proteolytic activity was not fully developed. Moreover, a further reduction was produced when a synchronized wave of hepatocytic mitoses was elicited by treatment with **casein** and(or) hydrocortisone. In contrast, acid DNase activity was higher in suckling than in young adult animals and further increased after **casein**-hydrocortisone treatment. β-Galactosidase activity in the developing liver was twice as high as in adults, but declined moderately after **casein**-hydrocortisone treatment. Thus, the regulation of lysosomal hydrolase activities is markedly heterogeneous in relation to liver growth. Whereas the activity of acid DNase appeared pos. correlated with growth and no consistent pattern could be found for other **nonproteolytic hydrolases**, the lysosomal proteolytic activity (most notably cathepsin B) was definitely reduced in all the conditions of liver growth investigated. This reduction may be causally related to the reduced rates of cell protein degradation associated with liver growth.

L18 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:3693 HCAPLUS
DOCUMENT NUMBER: 98:3693
TITLE: Enzymic modification of **milk**
AUTHOR(S): Olesen, T.
CORPORATE SOURCE: Novo Ind. A/S, Bagsvaerd, DK 2880, Den.
SOURCE: Bulletin of the International Dairy Federation (1982), 147, 12-15
CODEN: BIDFDY; ISSN: 0250-5118
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A discussion is presented of the use of (1) Kluyveromyces fragilis lactase [9031-11-2] in **milk** prepns., ice cream, and cheese manufacture, (2) Mucor miehei rennilase in baby food and Emmenthaler cheese manufacture, and (3) Bacillus licheniformis alcalase [9014-01-1] and Bacillus subtilis neutrase [9080-56-2] in food protein (**casein** and **whey**) hydrolysis. A **whey** product containing 36% protein, with a protein solubility of 80% at pH 7.0 and 45°, is only 45% soluble after heat treatment for 60 s at 100°. **Whey** hydrolysis with alcalase to a degree of hydrolysis of 4, measured by the pH stat **technique**, yields a **nonbitter hydrolyzate** with a protein solubility of 100% after heat treatment.

L18 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1977:465243 HCAPLUS
DOCUMENT NUMBER: 87:65243
TITLE: Study of the role of vitamins in nutrient media. Communication 1. Content of pyridoxine and pantothenic acid in a nutrient base in relation to the type of source raw materials and **method** of

its **decomposition**
AUTHOR(S): Ertuganova, Z. A.; Bulgakov, A. G.; Dugina, N. I.
CORPORATE SOURCE: USSR
SOURCE: Tekhnologiya Proizvodstva Sukhikh Diagnosticheskikh Pitatel'nykh Sred (1974), 6, 64-6
CODEN: TSDSDZ
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Hydrolyzates of sprat (from Caspian Sea) prepared by boiling contained 7.9-9.52 μg/mL pantothenate whereas hydrolyzate obtained without boiling contained only 1.3-1.46 μg/mL. Similarly boiled hydrolyzates of **casein** contained 0.01-1.01 μg/L pantothenate whereas **nonboiled hydrolyzates** contained 0.13-0.364 μg/mL. Pyridoxine content of boiled sprat or **casein** hydrolyzates was 6-8-fold higher than that of **nonboiled hydrolyzates.** Higher amts. of vitamins were found in sprat hydrolyzates than in **casein** hydrolyzates. Tryptic hydrolysis of **casein** produced more vitamins than peptic hydrolysis. The data may be useful for selection of bases for preparing nutrient media for microorganisms.

L18 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1967:408085 HCAPLUS
DOCUMENT NUMBER: 67:8085
TITLE: Rapid **method** for the quantitative estimation of microbial lipases
AUTHOR(S): Lawrence, Robert C.; Fryer, T. F.; Reiter, Bruno
CORPORATE SOURCE: Univ. Reading, Reading, UK
SOURCE: Nature (London, United Kingdom) (1967), 213(5082), 1264-5
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ten ml. of a 1% emulsion of tributyrin, or equimolar concns. of other synthetic triglycerides in water, are added to 90 ml. of a hot solution of Davis agar (1.2%) in 0.05M phosphate buffer (pH 8). One ml. of this emulsion is spread over a 2 + 1 in. area of a microscope slide, a 2.3 mm. diameter hole is bored with a thin steel tube, and 0.04 ml. of the lipase solution added by means of a microsyringe. The slide is placed in a Petri dish containing moist absorbent cotton wool and incubated at 30° for periods up to 48 hrs. The diams. of the zones of clearing are measured with vernier calipers. A thin-layer agar diffusion **method** was developed for the detection of lipolytic activity against butterfat. The lipase is added to a phosphate-buffered agar gel, on which is placed a lens tissue which has been painted with melted butterfat saturated with Victoria Blue. The hydrolysis of the thin uniform layer of butterfat is shown as a blue zone against the red background of unchanged dye. The quant. validity of these agar diffusion assays was determined with Micrococcus freudenreichii NCDO 1223. The extracellular lipase from a broth culture was concentrated by a factor of 100 by precipitation with (NH4)2SO4. The rate of hydrolysis, as measured by the clearing of tributyrin and trioctanoin emulsions, was proportional to the period of incubation and remained linear for at least 48 hrs. Maintaining the lipase preparation at 80° for 2 min. completely destroyed its activity, showing that **nonenzyme hydrolysis** was not responsible. A 1:75,500 dilution of purified lipase was the smallest concentration that gave a zone with tributyrin emulsion, 1:2500 with trioctanoin or tridecanoin emulsion, and 1:200 for the butterfat-Victoria Blue medium. The tributyrin emulsion assay was therefore .apprx.90 times more sensitive than the butterfat assay. Similar results were obtained with Pseudomonas

fragi NCDO 752. The supernatants from growing cultures of both the organisms used cleared tributyrin agar emulsions and showed no activity against butterfat, but when lipase in the supernatant was concentrated, the butterfat was readily hydrolyzed. The thin-layer diffusion assay was developed specifically for microbial lipases but it has been used successfully to determine the activities of lipases from skim **milk**, pig pancreas, and rat adipose tissue. 16 References.

L18 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1966:489936 HCAPLUS
DOCUMENT NUMBER: 65:89936
ORIGINAL REFERENCE NO.: 65:16794h,16795a-d
TITLE: Analysis of the organic substance in the therapeutic mud from the salterns of Cervia
AUTHOR(S): Pozzo-Balbi, Teodoro; Nobile, Luciano; Roveri, Paola
CORPORATE SOURCE: Univ. Bologna, Italy
SOURCE: Annali di Chimica (Rome, Italy) (1966), 56(7), 804-19
CODEN: ANCRAI; ISSN: 0003-4592
DOCUMENT TYPE: Journal
LANGUAGE: Italian

AB The marine mud deposited in the salterns of Cervia was analyzed after separation into groups by Benade's **method** (cf. Bamer, et al., Handbuch der Lebensmittelchemie. Berlin: Julius Springer. 1935. Bd. VIII/3. p. 265). Analyses were made on air-dried mud and washed mud (from which water-soluble substances had been removed). Organic matter was determined from the C found by combustion, this being taken to be 58% of the organic matter (Bader, CA 49, 2795h). In the presence of Cl ions in the air-dried samples the **method** of Terent'ev and Luskina (CA 53, 11092i) was used. The fresh mud contained 49.88% solid matter, 15.05% soluble in water. The organic matter and protein (Kjeldahl N + 6.25) in the various fractions determined on the dry solid matter were (%): total, 2.07, 0.881; water-soluble (80 g. air-dried sample boiled with 1.51. H2O) (II), 0.090, 0.081; soluble in hexane and EtOH (residue from II extracted first with hexane then with absolute EtOH) (III), 0.260, 0.031; insol. (IV), 1.72, 0.769; soluble in dilute H2SO4 (hemicelluloses, proteins; IV (6 g.) refluxed for 3 hrs. with 72% H2SO4 (10 ml.) in water (500 ml.)) (V), 0.660, 0.231; insol. (VI), 1.06, 0.538; soluble in concentrated H2SO4 (celluloses and protein; IV (6 g.) stirred for 3 hrs. with 72% H2SO4 (10 ml.), then diluted with water (500 ml.) and refluxed for 5 hrs.) (VII), 0.913, 0.350; insol. (contains lignins, chitin, and **non-hydrolyzable** N compds.) (VIII), 0.810, 0.419. Sugars and amino acids in II and V were determined by chromatography after demineralization by passage through an ion exchanger (H+) and Amberlite IR 4B (OH-). Sugars were found in the eluate from the latter and amino acids in the 2N-NH3 eluate from the former. The concentrated sugar eluate was subjected to thin-layer chromatography on cellulose MN 300 by Schweiger's **method** (CA 59, 3069f); no sugars were found in II but the following were found in V: galactose, glucose, mannose, arabinose, xylose, fucose, ribose, and rhamnose. The amino acid eluate was evaporated below 50° and the residue dissolved in 0.1N HCl (0.5 ml.) and chromatographed as for the sugars by Wollenweber's **method** (CA 59, 3069d). II contained glutamic acid, glycine, alanine, leucine, and lysine; V contained aspartic and glutamic acids, glycine, alanine, leucine, and **arginine.** Extraction of fresh mud with absolute EtOH, then with C6H6-petroleum ether; and thin-layer chromatography on silica gel revealed the presence of β-carotene (1.88 mg./100 g. dry mud); there was no α-carotene. A C6H6-alc. extract of the dry mud gave a product possessing marked estrogenic activity. 32 references.

L18 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:46884 HCAPLUS
DOCUMENT NUMBER: 62:46884
ORIGINAL REFERENCE NO.: 62:8342b-c
TITLE: Properties and amino acid **composition** of the humic acids of certain Bulgarian soils
AUTHOR(S): Vodenicharov, Iliya; Istatkov, Stoyan
SOURCE: Rastenievudni Nauki (1964), 1(8), 81-8
CODEN: RSTNA7; ISSN: 0568-465X
DOCUMENT TYPE: Journal
LANGUAGE: Bulgarian
AB Humic acids of virgin soils have larger absorption spectrum values and higher coagulation levels compared with corresponding cultivated soils. Humic acids from cultivated soils possess a higher total amount of amino acids, and a larger amount of **non-hydrolyzable** residue than corresponding virgin lands. Humic acids of virgin and cultivated cinnamon forest soils and chernozem-smolnitsa contain leucine, isoleucine, phenylalanine, valine, tyrosine, proline, α-alanine (I), threonine, glycine (II), serine (III), glutamic acid (IV), aspartic acid (V), **arginine**, **histidine**, and lysine. I, II, III, IV, and V were found in the largest amts.

L18 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1964:76828 HCAPLUS
DOCUMENT NUMBER: 60:76828
ORIGINAL REFERENCE NO.: 60:13547e-h
TITLE: Results of comparative determinations of amino acids by paper-chromatographic and microbiological procedures
AUTHOR(S): Nehring, K.; Wuensche, J.
CORPORATE SOURCE: Oskar Kellner Inst. Tierernaehrung, Berlin
SOURCE: Pharmazie (1964), 19(2), 128-33
CODEN: PHARAT; ISSN: 0031-7144
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Considerable differences occur in detns. of amino acids in a given food or fodder; these are considered due to variance of results with one and the same **method** rather than differences in the material studied or differences between types of **methods** used. Differences were investigated between paper chromatography and microbiol. procedures and in reproducibility of results within each **method.** Addns. were made of known wts. of 6 representative amino acids (**arginine** (I), **histidine** (II), lysine (III), methionine (IV), cystine (V), threonine (VI)) to (1) amino acid mixts. (synthetic barley) both unhydrolyzed and hydrolyzed (boiling 24 hrs. with 6N HCl) after admixt. with both carbohydrates and fatty oil; (2) a fish meal; (3) a summer barley (fodder with relatively low protein content); and a mixture of (2) and (3) (N = 1:1); then the content of the resp. amino acids was determined by the 2 procedures and the variances between and within determined Values by the 2 **methods** did not correspond closely; the greatest differences were in the hydrolyzates of I, III, and V. In the **non-hydrolyzed** mixts., the correspondence was generally closer than with the hydrolyzed. The microbiol. **method** showed smaller differences between individual detns. and the results were more reproducible than by the 2-dimensional chromatographic **method** used. Significant losses following hydrolysis were particularly pronounced with I, II, and VI, with the chromatographic **method;** with I, IV, and VI, using the microbiol. **method.** Approx. 50% of V during acid hydrolysis for 2 hrs. under 2 atmospheric pressure or 24 hrs. at normal pressure was transformed into cysteic acid, reducing by half its

microbiol. value. The time of the experiment and storage of the hydrolyzate had no effect on the amino acid values. This confirms earlier findings (CA 53, 7320b) that preservation of the hydrolyzate in acid is possible for periods of more than 6 weeks.

L18 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1963:476382 HCAPLUS
DOCUMENT NUMBER: 59:76382
ORIGINAL REFERENCE NO.: 59:14244e-f
TITLE: Blocking of tryptic cleavage of arginyl bonds by the chemical modification of the guanidino group with benzil
AUTHOR(S): Itano, H. A.; Gottlieb, A. J.
CORPORATE SOURCE: Natl. Inst. of Arthritis & Met. Diseases, Bethesda, MD
SOURCE: Biochemical and Biophysical Research Communications (1963), 12(5), 405-8
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Benzil (10-fold excess), added to a solution of protein in 70-80% ethanol which is 0.2M in strong base, reacts with argi-nine in the protein at room temperature (16-18 hrs.) under N atmospheric After neutralization the solvent is evaporated under reduced pressure and the salt and excess benzil removed by dialysis or extraction Proteins of known oomph, were subjected to the process (modified for the properties of the protein) and hydrolyzed with trypsin or acid. Products did not include the usual **arginine** residues or give the Sakaguchi reaction. In addition, the use of strongly alkaline medium for the reaction of benzil with protein did not result in detectable **nonspecific hydrolysis** of peptide bonds.
Arginine residues are quant. modified but other residues are unaffected.

L18 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1963:471451 HCAPLUS
DOCUMENT NUMBER: 59:71451
ORIGINAL REFERENCE NO.: 59:13267c-e
TITLE: Pancreatic lipase hydrolysis of cow **milk** fat
AUTHOR(S): Jack, E. L.; Freeman, C. P.; Smith, L. M.; Mickle, J. B.
CORPORATE SOURCE: Univ. of California, Davis
SOURCE: Journal of Dairy Science (1963), 46, 284-90
CODEN: JDSCAE; ISSN: 0022-0302
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Knowledge of the position of individual fatty acids (I) within triglycerides is necessary to understand fat utilization. Pancreatic lipase hydrolysis to convert triglycerides to 2-monoglycerides has been used to study this type of glyceride structure in many food fats, but it has been claimed that it cannot be used with cow **milk** fat because butyric acid is hydrolyzed more rapidly than other acids. This study was undertaken to determine if there were conditions under which this **technique** could be validily applied to **milk** fat. The criteria set forth for the applicability of this **technique** were: **nonpreferential hydrolysis** of triglyceride species, absence of a substantial degree of complete hydrolysis, and absence of a significant amount of acyl migration during hydrolysis. Although there was no evidence of preferential hydrolysis at the 1-3 positions there was some complete hydrolysis, and acyl migration did not appear to be occurring at a significant rate. The validity of the procedures employed was

demonstrated on a known and unique structure fat (pig body). The **technique** can give results that may be used to establish general relations. In cow **milk** fat, the majority of I were found uniformly distributed within the glyceride, except for C4- and C6-acids which are predominantly in the external positions, and C16-acids which tend to concentrate in the 2 position. 19 references.

L18 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1956:9798 HCAPLUS
DOCUMENT NUMBER: 50:9798
ORIGINAL REFERENCE NO.: 50:2078i,2079a
TITLE: Constitution of the nonprotein free and combined amino acids of the hemolymph of caterpillars and chrysalises of Sphinx ligustri
AUTHOR(S): Duchateau, Ghislaine; Florkin, Marcel
CORPORATE SOURCE: Univ. Liege, Belg.
SOURCE: Bulletin de la Societe de Chimie Biologique (1955), 37, 239-45
CODEN: BSCIA3; ISSN: 0037-9042
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 47, 8914c; 48, 14000a. Fifteen amino acids were determined in the **non-hydrolyzed** and HCl-hydrolyzed hemolymph by microbiol. **methods** previously described. The **composition** of the caterpillar hemolymph varied somewhat with the time of year and with the type of leaves (lilac, ash, or privet) fed. The **composition** of the chrysalid hemolymph was quite different from that of the caterpillars.

L18 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1929:45216 HCAPLUS
DOCUMENT NUMBER: 23:45216
ORIGINAL REFERENCE NO.: 23:5204g-i,5205a
TITLE: Studies on substituted proteins: nitration and iodation of globins
AUTHOR(S): Bauer, Hugo; Strauss, Eduard
SOURCE: Biochemische Zeitschrift (1929), 211, 163-90
CODEN: BIZEA2; ISSN: 0366-0753
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB It is shown that in ovalbumin, serumalbumin and serum globulin the I2 bound to C stands in stoichiometric relation to the tyrosine content of these proteins, 2 atoms of I being taken up for each tyrosine. This cannot be regarded as a case of adsorption. Globin has a peculiar behavior towards I in that it combines with double the amount of I that would correspond to its tyrosine content. This leads to the conclusion that here 2 atoms of I become attached to the C in the 3,5 position and 2 more on the imidazole ring of **histidine.** Nitrated globin contains the NO2 group in the tyrosine and **tryptophan.** When the nitroglobin is iodated only one I enters the mononitrotyrosine and 2 atoms of I the **histidine.** Part of the 2 taken up either by globin or by nitroglobin is split off by cold H2SO3, and this hydrolyzable fraction has a definite whole number ratio to the **non-hydrolyzable** moiety of the I bound to the C, and is thought to be bound to an NH group. Depending upon the **method** of iodating (bicarbonate or ammonia) the globin shows the presence of 1 or 2 such NH groups. The combination of I with NH2 protects the protein from the action of pepsin-HCl. This protection is lost by removing the I and can be again restored. It is therefore concluded that the NH group which binds I is the CO-NH peptide linkage, Changes in solubility in dilute acids and the variation of the

pepsin-HCl action occasioned by heat are compared in these substituted proteins with the behavior of the native proteins.

L18 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1929:36029 HCAPLUS
DOCUMENT NUMBER: 23:36029
ORIGINAL REFERENCE NO.: 23:4219i,4220a-i,4221a-f
TITLE: Some new aryliminooxy-γ-triazidinic derivatives. I
AUTHOR(S): Ostrogovich, Adriano; Median, Vittoria Bena
SOURCE: Gazzetta Chimica Italiana (1929), 59, 181-98
CODEN: GCITA9; ISSN: 0016-5603
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A preliminary note. Previous expts. have shown (cf. O., Gazz. chim. ital. 39, i, 540(1909)) that BzH condenses with guanylurea (I) and with biuret in the presence of concentrated H2SO4 to form γ-triazidinic derivs. The present paper deals with the condensation of I with o-(II), m-(III) and p-O2NC5H4CHO (IV) and p-Mc2NC6H4CHO (V). The products were aryliminooxy-γ-triazidines, showing in conjunction with the earlier work that the condensation reaction is a general one for aryl aldehydes. I let stand 2-3 days at room temperature with II in concentrated H2SO4, poured into ice-water and purified with HCO2H and animal charcoal, yields o-nitrophenyliminooxy-γ-triazidine sulfate, (C9H9N5O3)2.H2SO4 (VI), m. 249-50° (**decomposition**), turns dark brick-red when exposed to light. Treated with NH4OH or better with concentrated aqueous Na2CO3, VI forms o-nitrophenyliminooxy-γ-triazidine (VII), m. 208-9°, turns brown-red in light (more sensitive than VI), soluble in cold aqueous alkaline hydroxides. HCl salt, C9H9N6O3.HCl.H2O, m. 235-6° (**decompn**.); its H2O of crystallization is difficult to eliminate and is readily reabsorbed. Chloroplatinate, (C9H9N5O3.HCl)4PtCl4 (VIII), Cu-color, m. 233-4°, rapidly turns golden yellow on exposure to light. The normal salt could not be obtained, in contrast to the corresponding derivs. of III and IV. This is the 1st case of a quadrivalent Pt complex in which there are 4 mols. of a HCl salt of a base. It may have the structure [PtCl8](H.C9H9N5O3)4, in which Pt has the coordination number 8, as with complexes of Mo, W and other elements. Nitrate of VII, C9H9N5O3.HNO3, m. 216-8° (**decomposition**), becomes carmine-red when exposed to sunlight in aqueous suspension with a little HNO3 and a trace of Ag ion. Monopicrate of VII, C8H8N5O3. C6H3N3O7, yellow, m. 213-5°, becomes more intensely yellow when exposed to light; dissolved in hot aqueous picric acid (saturated when cold) it forms a dipicrate, hydrolyzes extremely easily. Hot aqueous VII and AgNO3 precipitate a Ag salt, [Ag(C9H9N6O2)2]NO3, m. 200° (**decomposition**). Aqueous AgNO3 added to VII in hot NH4OH, or aqueous NH3-AgNO2 added to hot aqueous VII ppts. the Ag salt, C9H8N5O3Ag, which is the true Ag salt with the enolic structure of VII. In a similar way from I and III was obtained m-nitrophenyliminooxy-γ-triazidine sulfate, m. 257-8° (**decomposition**), and m-nitrophenyliminooxy-γ-triazidine (IX), m. 222°. Compared with VII, it is relatively insensitive to light, though it ultimately turns pale yellow. Its salts are quite stable in light and change little or not at all. HCl salt turns yellow at 260°, m. 268°. Chloroplatinate has the normal hexachloroplateate form, (C9H9N6O3)2H2PtCl6, orange-yellow, m. 255-6° (**decomposition**). No compound analogous to VIII was obtained. Nitrate, m. 250° (**decompn**). Monopicrate, C9H9N6O3.C6H3N3O7.H2O, canary-yellow, m. 210-11°, stable, could not be hydrolyzed. Dipicrate, pale yellow,

very readily hydrolyzed, contains no H2O of crystallization Complex Ag salt, [Ag(C9H9N5O3)2NO3. Normal Ag salt, C9H8N3O3Ag. Both these Ag salts were formed as before. Following the same procedure as before, I and IV form p-nitrophenyliminooxy-γ-triazidine sulfate, m. 253-4° (**decomposition**). p-Nitropheyliminooxy-γ-triazidine, from dilute EtOH, m. 180° (**decomposition**). HCl salt, m. 250° (**decompn**). Chloroplatinate, (C9H9N5O3)2.H2PtCl6, from hot water, reddish orange, m. 246-7° (**decomposition**). Nitrate, from hot water, m. 230-1° (**decomposition**). Monopicrate, dark yellow, turns darker in light, m. 212-3° (turning brown-red). Dipicrate, by heating the monopicrate with excess concd, alc. picric acid, yellow, is readily hydrolyzed, could not be obtained pure. Complex Ag salt, [Ag(C9H9N5O3)2]NO3. Normal Ag salt, C9H8N5O3Ag. I, p-Me2NC6H4CHO and concentrated H2SO4 let stand 2-3 days at room temperature, poured into ice-water and almost neutralized with Na2CO3, ppts. p-dimethylaminophenyliminooxy-γ-triazidine sulfate, (C11H14N6O)2.H2SO4 (X), m. 252-3° (**decomposition**), turns yellow in sunlight; heated with 2N H2SO4 and cooled it ppts. another sulfate, C11H15N8O.H2SO4 (XI), m. 208-10° (**decomposition**), not colored by sunlight, hydrolyzed on dilution with water to X. X or XI dissolved in excess concentrated H2SO4, a relatively large volume of EtOH-Et2O (equal parts) added, yields a 3rd sulfate, C11H15N5O.2H2SO4 (XII), m. 120-2° to a **milky** liquid which becomes green at 180-90°, hydrolyzes very easily to XI and thence to X, is not colored by sunlight. Excess concentrated Na2CO2 added to X, XI or XII, filtered, washed with water and the residue recrystd. from boiling water or hot dilute MeOH or EtoH, yields p-dimethylaminophenyliminooxy-γ-triazidine (XII), C11H15N8O.H2O, m. 220-1° (**decomposition**); its H2O of crystallization is eliminated in vacuo at 140° and is inabsoibed on contact with the atmospheric; it is much less soluble than VII and IX in aqueous alkaline hydroxides, which must be hot to dissolve it. It becomes intensely yellow in sunlight. Its hot aqueous solns. are distinctly alkaline, which suggests that the mol. of H2O is bound to the Me2N group, forming a true NH4 hydroxide. This would be the first known stable hydroxide of an organic tertiary amine. This would explain why XII gives stable **non-hydrolyzable** salts, even with HCO3H and AcOH, whereas its analogous compds. do not. Mono-HCl salt, C11H15N8O. HCl, by evaporation of XII in 2 N HCl (calculated quantity), m. 212-4° (becoming green just below the m. p. and ruby-red just above the m. p.). XII evaporated with excess 2 N HCl and a little AcMe added to facilitate crystallization yields the di-HCl salt, C11H15N5O.2HCl.H2O, turns emerald-green at 180°, m. 222-3° (**decomposition**), also formed by passing dry HCl over dry XII. AcMe added to XII in 2 N HCl ppts. the di-HCl salt, C11H15N8O.HCl.2H2O, m. 200° (first becoming emerald-green). A crystalline chloroplatinate could not be obtained, the product always being a sirup. XII dissolved in dilute HNO3 and AcMe added ppts. the nitrate, C11H15N5O.HNO3, rose-colored, m. 215° (**decomposition**). XII dissolved in hot dilute AcOH, and the product recrystd. from water, yields the acetate, C11H15N5O.AcOH, yellowish, m. 202-3° (**decomposition**). XII dissolved in dilute HCO2H yields the formate, C11H15N8O.HCO2H, m. 213° (**decompn**.). Aqueous picric acid (XIII) added to hot aqueous XII (equimol. parts) ppts. the mono-picrate, C11H15N5O.C6H3N2O7 (XIV), bright red, m. 220° (**decomposition**), also formed by agitating XII (moist freshly prepared powder) with excess aqueous XIII, and recrystg. from water. XIV suspended in cold saturated aqueous XII is transformed into the tri-picrate, C11H15N5O.3C6H3N3O7 (XV), lemon-yellow, softens 185°, m. 190° (**decomposition**), is hydrolyzed in hot water to XIV. It

is probable that the 1 mol. of XIII in XIV is fixed to the Me2N group, while the other 2 mols. of XIII in XV are bound to the triazidine nucleus. Besides adding 2 more mols. of XIII to form XV, XIV has the power to add other acids, e. g., HCl, HNO3 and H2SO4, forming mixed salts. All the latter are readily hydrolyzed to XIV. XIV and N HCl (calculated quantity) let stand and the product dried. form the picromonohydrochloride, C11H15N5O.C6H3N3O7.HCl (XVI), light yellow, turns red around 130°, softens and becomes dark green at 185°, and m. 190° (**decomposition**). XIV and 3 N HCl let stand overnight deposit the picrotrihydrochloride C11H15N5O.C6H3N3O7.3HCl, (XVII), yellowish, m. 153-6° (**decomposition**) Kept in vacuo over soda lime a long time, XVII forms the picrodihydrochloride C11H15N6O. C6H3N3O7.2HCl, yellowish, m. approx. 176° (**decomposition**). By hydrolysis, all 3 mols. of XIII in XV can be eliminated, XIV being formed when hot, while at ordinary temperature a lemon-yellow monopicrate (XVIII) is formed. This manopicrate contains no Cl ions, yet has the phys. properties of XVI, including its m. p., the only difference between XVI and XVIII being that XVI turns green around its m. p. The difference between XIV and XVIII is being studied. All these derivs. contain in the triazidine nucleus a CO group bound to 2 NH radicals and are soluble in aqueous alkaline hydroxides, first passing to the acid enolic form. Nevertheless, this enulic form is stable only as metallic salts and could not be obtained in the free state, since it reverted immediately to the original CO form when its alkaline solns. were neutralized with AcOH or even with CO2. Furthermore, by dissolving in hot NH4OH, the compds. are recovered unaltered on cooling, without the formation of any NH4 salts. The carbimidyl group (the C atom of which is an integral part of the triazidine group) probably represents the only stable form, for Ac derivs. could not be obtained which should be formed even if the compds. were partially of the amine structure or if the seminuclear imine were to be transformed tautomerically during the reaction to the amine structure. For these reasons the compds. in the present paper are considered to be derivs. of the hypothetical sym. hexahydrotriazine γ-triazidine. In virtue of the asymmetry of the triazidine nucleus, these derivs. should all be racemic and it should be possible to resolve them into optical antipodes by a suitable acid.

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=> d que stat l16
L1            1 SEA FILE=REGISTRY ABB=ON  CASEIN/CN
L2            2 SEA FILE=REGISTRY ABB=ON  ARGININE/CN
L3            2 SEA FILE=REGISTRY ABB=ON  HISTIDINE/CN
L4            2 SEA FILE=REGISTRY ABB=ON  TRYPTOPHAN/CN
L5       415923 SEA FILE=HCAPLUS ABB=ON  (?WHEY? OR L1 OR L2 OR L3 OR L4 OR
                 ?CASEIN? OR ?ARGININE? OR ?HISTIDINE? OR ?TRYPTOPHAN? OR
                 ?MILK?)
L6            2 SEA FILE=HCAPLUS ABB=ON  L5 AND (?CASEINO?(W)?GLYCO?(W)?MACROPE
                 PTID? OR ?CASEINOGLYCOMACROPEPTID?)(L)(?REMOV? OR ?EXTRACT? OR
                 NOT?(3A)(?CONTAIN? OR ?CONTENT?))
L7            2 SEA FILE=HCAPLUS ABB=ON  L6 AND (?LIPID? OR ?CARBOHYDRAT? OR
                 ?PROTEIN?)
L9          123 SEA FILE=HCAPLUS ABB=ON  L5 AND NON?(W)?HYDROL?
L10          32 SEA FILE=HCAPLUS ABB=ON  L9 AND (?COMPOS? OR ?METHOD? OR
                 ?TECHNIQ?)
L12          34 SEA FILE=HCAPLUS ABB=ON  L10 OR L7
L13         121 SEA L12
L14          84 DUP REMOV L13 (37 DUPLICATES REMOVED)
L15          74 SEA L14 AND NON(W) HYDROL?
L16           6 SEA L15 AND INFANT?(2A) FORMULA?

=> d ibib abs l16 1-6

L16  ANSWER 1 OF 6     MEDLINE on STN
ACCESSION NUMBER:   2002206582     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 11940387
TITLE:              Epidermal growth factor concentrations in human
                    milk, cow's milk and cow's milk
                    -based infant formulas.
AUTHOR:             Xiao Xin; Xiong Aihua; Chen Xin; Mao Xiaojian; Zhou
                    Xiaoguang
CORPORATE SOURCE:   Department of Pediatrics, First Affiliated Hospital,
                    Medical College of Jinan University, Guangzhou 510632,
                    China.. txin@jnu.edu.cn
SOURCE:             Chinese medical journal, (2002 Mar) 115 (3) 451-4.
                    Journal code: 7513795. ISSN: 0366-6999.
PUB. COUNTRY:       China
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200205
ENTRY DATE:         Entered STN: 20020410
                    Last Updated on STN: 20020502
                    Entered Medline: 20020501
AB   OBJECTIVE: Because maternal epidermal growth factor (EGF) may be an
     adaptive response to accelerate growth and maturation in premature
     infants, we compared the EGF content in fresh cow's milk and
     cow's milk-based infant formulas with full
     and preterm mother's milk.  METHODS: EGF content of 57
     human colostrum from mothers delivering prematurely and at term, 4
     different fresh cow's milk and 8 different cow's milk
     -based infant formulas was determined by
     radioimmunoassay (RIA).  RESULTS: Human milk from mothers of
     premature infants had a higher EGF content compared to that from mothers
     of term infants (28.2 +/- 10.3 nmol/L vs. 17.3 +/- 9.6 nmol/L).  EGF
     content in human milk negatively correlated with gestational age
     and birth weight of neonates.  EGF content in fresh cow's milk
     (13.8 - 18.2 nmol/L) was similar to that in human term milk.
     EGF levels in non-hydrolyzed protein formulas were
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much lower (5.6 - 8.6 nmol/L), and were undetectable in hydrolyzed protein formulas. CONCLUSION: The high EGF content in premature **milk** may represent a maternal compensatory mechanism to accelerate the growth and development of immature infants. Feeding infants with breast **milk** from their own mother should be advocated since there is lack of EGF in cow's **milk**-based **infant formulas.**

L16 ANSWER 2 OF 6 MEDLINE on STN
ACCESSION NUMBER: 95331346 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7607279
TITLE: Characterization of antigens and allergens in hypo-allergenic **infant formulae.**
AUTHOR: Gortler I; Urbanek R; Forster J
CORPORATE SOURCE: Universitats-Kinderklinik, Freiburg, Germany.
SOURCE: European journal of pediatrics, (1995 Apr) 154 (4) 289-94. Journal code: 7603873. ISSN: 0340-6199.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199508
ENTRY DATE: Entered STN: 19950828
Last Updated on STN: 19950828
Entered Medline: 19950816

AB The antigenicity and allergenicity of so-called hypo-allergenic **infant formulae** is mainly determined by the degree of hydrolysis and ultrafiltration. Five different formulae were investigated by means of immunoblotting and RAST in order to characterize the antigens and allergens regarding their molecular weights, molecular origin and their ability to bind human IgG and IgE antibodies: A **non hydrolysed infant formula** (I-F), a mixture of the major cow's **milk** proteins (PM), a **whey**-based **infant formula** (W-H), a **whey**-based and ultra-filtrated **infant formula** (U-H), a **casein** /**whey**-based **infant formula** (CW-H). By immunoblotting we demonstrated that all tested formulae still contain antigens with molecular weights from 3 to 67 kD. But when compared with I-F and PM the antigen content of the hydrolysed formulae was considerably lower. The lowest antigen content could be demonstrated in U-H, which contains **casein** fragments (3-6 kD) and beta-lactoglobulin and its fragments (6-18 kD). W-H and CW-H contain bovine serum albumin, beta-lactoglobulin, **casein** and their fragments (3-67 kD). All hydrolysed formulae tested showed a reduced IgE-binding capacity. Three out of 12 cow's **milk** allergic children possessed IgE binding to U-H or W-H, and 5 of them IgE against CW-H. Conclusion. The enzymatic hydrolysis plus ultra-filtration seems to be the most efficient **method** to reduce the antigen content of so-called hypo-allergenic **infant formulae.**

L16 ANSWER 3 OF 6 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:317307 BIOSIS
DOCUMENT NUMBER: PREV200300317307
TITLE: IgE-mediated cow's **milk** allergy: Skin prick test subtypes and clinical phenotypes using cow's **milk** hydrolysate **infant formulas.**
AUTHOR(S): Copenhaver, Christopher C.; Schwartz, Robert H. [Reprint Author]; Halterman, Jill S.; Conn, Kelly M.
CORPORATE SOURCE: 9 Cavan Way, Pittsford, NY, 14534, USA
rhsz@eznet.net
SOURCE: Pediatric Asthma Allergy & Immunology, (Summer 2003) Vol.

16, No. 2, pp. 67-76. print.
ISSN: 0883-1874.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jul 2003
Last Updated on STN: 9 Jul 2003

AB In 1986, Hill (Australia) classified group 1 children with cow's **milk** allergy (CMA) as having rapid onset, IgE-mediated reactions. In 1989, Schwartz (Rochester, NY) subtyped group 1 children (n = 75) into 1A, 1B, and 1C based on skin prick tests (SPTs) to **non-hydrolyzed** (CM-Similac(R)) and hydrolyzed CM **infant formulas** (Good Start(R)-partially hydrolyzed; Nutramigen(R)-extensively hydrolyzed). Our objective was to test the hypothesis that SPT subtypes 1A, 1B, and 1C represent different clinical phenotypes. Children with group 1 CMA (n = 170) were evaluated between 1989 and 2000. Clinical data analyzed included SPT subtype, signs, and symptoms after CM ingestion, age of onset, presence of other atopic conditions, serum CM-specific IgE, total serum IgE, and follow-up SPTs. Compared to 1A (n = 82), 1B (n= 58), and 1C (n = 30) had higher rates ($p < 0.001$) of systemic reactions to CM, higher ($p < 0.001$) serum-specific IgEs to CM proteins (alpha-lactalbumin, beta-lactoglobulin, **casein**), higher prevalences of recurrent wheezing/asthma (1A = 23%, 1B = 41%, 1C = 57%; $p < 0.001$), and were 2.34 and 4.34 times more likely to have physician-diagnosed asthma. Prevalence of atopic dermatitis and mean total serum IgE were not significantly different. IgE-mediated CMA frequently is the first clinically identifiable allergic event in early life. SPT with CM and CM-hydrolysate **infant formulas** classifies these children into three SPT subtypes (1A, 1B, 1C) and two clinical phenotypes. 1A are "topical immediate reactors"-mild reactions, predominantly limited to contact urticaria and/or emesis. 1B and 1C, called "systemic reactors," are more highly sensitized and clinically reactive-generalized urticaria, angioedema, rhinitis, cough, stridor, and have an increased risk of asthma. Including CMA SPT subtypes and clinical phenotypes in future genetic studies might be informative in sorting out the relationships of the environment and child development to the phenotypic spectrum of asthma.

L16 ANSWER 4 OF 6 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-300077 [31] WPIDS
CROSS REFERENCE: 2000-657793 [64]; 2001-211108 [21]
DOC. NO. CPI: C2001-092073
TITLE: **Composition** for an **infant formula**, useful in addressing malnutrition, comprises **whey protein**, **casein protein**, free **arginine**, free **histidine** and **tryptophan** rich **milk protein**, free **tryptophan** or their mixture.
DERWENT CLASS: B05 D13
INVENTOR(S): BALLEVRE, O; HASCHKE, F; JOST, R; KRATKY, Z; KUSLYS, M; MAIRE, J; MEISTER, N; SECRETIN, M
PATENT ASSIGNEE(S): (NEST) SOC PROD NESTLE SA
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001022837	A1	20010405	(200131)*	EN	16

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

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         LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
         SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
   AU 2000076543   A  20010430 (200142)
   EP 1220620      A1 20020710 (200253)  EN
      R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
         RO SE SI
   SK 2002000579   A3 20020806 (200261)
   CZ 2002001135   A3 20020814 (200263)
   BR 2000014377   A  20021119 (200305)
   CN 1377238      A  20021030 (200314)
   JP 2003510059   W  20030318 (200321)       21
   HU 2002002886   A2 20030128 (200323)
   ZA 2002002081   A  20030827 (200362)       27
   NZ 517994       A  20030829 (200365)
   MX 2002002848   A1 20020801 (200367)
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001022837	A1	WO 2000-EP8910	20000912
AU 2000076543	A	AU 2000-76543	20000912
EP 1220620	A1	EP 2000-965982	20000912
		WO 2000-EP8910	20000912
SK 2002000579	A3	WO 2000-EP8910	20000912
		SK 2002-579	20000912
CZ 2002001135	A3	WO 2000-EP8910	20000912
		CZ 2002-1135	20000912
BR 2000014377	A	BR 2000-14377	20000912
		WO 2000-EP8910	20000912
CN 1377238	A	CN 2000-813554	20000912
JP 2003510059	W	WO 2000-EP8910	20000912
		JP 2001-526061	20000912
HU 2002002886	A2	WO 2000-EP8910	20000912
		HU 2002-2886	20000912
ZA 2002002081	A	ZA 2002-2081	20020313
NZ 517994	A	NZ 2000-517994	20000912
		WO 2000-EP8910	20000912
MX 2002002848	A1	WO 2000-EP8910	20000912
		MX 2002-2848	20020314

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000076543	A	Based on	WO 2001022837
EP 1220620	A1	Based on	WO 2001022837
SK 2002000579	A3	Based on	WO 2001022837
CZ 2002001135	A3	Based on	WO 2001022837
BR 2000014377	A	Based on	WO 2001022837
JP 2003510059	W	Based on	WO 2001022837
HU 2002002886	A2	Based on	WO 2001022837
NZ 517994	A	Based on	WO 2001022837
MX 2002002848	A1	Based on	WO 2001022837

PRIORITY APPLN. INFO: GB 1999-23048 19990929
AN 2001-300077 [31] WPIDS
CR 2000-657793 [64]; 2001-211108 [21]

AB WO 200122837 A UPAB: 20031017
NOVELTY - **Composition** for an **infant formula** comprises **whey protein**, **casein protein**, free **arginine**, free **histidine** and **tryptophan** rich **milk protein**, free **tryptophan** or a mixture of these.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(i) a **method** of producing a **composition** as above;
(ii) use of a **composition** as above in the manufacture of a medicament or a nutritional product for addressing malnutrition;
(iii) addressing malnutrition comprising administering the above **composition.**
USE - The **composition** is useful in the manufacture of a medicament or nutritional product for addressing malnutrition.
Dwg.0/0

L16 ANSWER 5 OF 6 FROSTI COPYRIGHT 2004 LFRA on STN
ACCESSION NUMBER: 588758 FROSTI
TITLE: **Composition** comprising **casein** protein and **whey** protein.
INVENTOR: Kuslys M.; Secretin M.-C.; Jost R.; Maire J.-C.; Ballevre O.; Haschke F.; Kratky Z.; Meister N.
PATENT ASSIGNEE: Societe des Produits Nestle SA
SOURCE: European Patent Application
PATENT INFORMATION: EP 1220620 A1
WO 2001022837 20010405
APPLICATION INFORMATION: 20000912
PRIORITY INFORMATION: United Kingdom 19990929
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An **infant formula** containing **casein** protein and **whey** protein is described. The **composition** contains **non-hydrolysed** protein, free **arginine**, **tryptophan** and **histidine**, a lipid source such as **milk** fat or soya oil, and a carbohydrate source such as lactose. The **whey** protein may be acid **whey** protein or sweet **whey** protein from which **caseino** -glycomacropeptide has been removed. The formula may be used in the preparation of a medicament or nutritional product for the treatment of malnutrition.

L16 ANSWER 6 OF 6 FROSTI COPYRIGHT 2004 LFRA on STN
ACCESSION NUMBER: 554322 FROSTI
TITLE: **Composition** comprising **casein** protein and **whey** protein.
INVENTOR: Kuslys M.; Secretin M.-C.; Jost R.; Maire J.-C.; Ballevre O.; Haschke F.; Kratky Z.; Meister N.
PATENT ASSIGNEE: Societe des Produits Nestle SA
SOURCE: PCT Patent Application
PATENT INFORMATION: WO 2001022837 A1
APPLICATION INFORMATION: 20000912
PRIORITY INFORMATION: United Kingdom 19990929
DOCUMENT TYPE: Patent
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An **infant formula** containing **casein** protein and **whey** protein is described. The **composition** contains **non-hydrolysed** protein, free

arginine, **tryptophan** and **histidine**, a lipid source such as **milk** fat or soya oil, and a carbohydrate source such as lactose. The **whey** protein may be acid **whey** protein or sweet **whey** protein from which **caseino** -glycomacropeptide has been removed. The formula may be used in the preparation of a medicament or nutritional product for the treatment of malnutrition.